

## ABSTRACT

A stacked lithium-ion rechargeable battery comprises a plurality of stacked positive and negative electrode couples forming a battery core, each of said couple having a negative electrode, a positive electrode, a separator, and non-aqueous electrolyte, all 5 encased in a battery case. The core is secured by a clamp case and said clamp case is encased in a battery shell. There are thin neck parts (or conducting tabs) extending from the base plates of the positive and negative electrodes to form the current collectors of the positive and negative electrodes. The positive electrodes and negative electrodes are arranged such that the two current collectors are located on the two opposite ends of the 10 core. The current collector at each end of the core is clamped by a clip and connecting to the respective positive and negative terminals. This stacked lithium-ion rechargeable battery has a relatively low impedance, high discharge rate and high safety performance. The reusable rate of this battery is high after the battery short-circuits.